



# **The Care of Rabbits**

**W. J. Hamilton, Jr.**

# THE CARE OF RABBITS

W. J. HAMILTON, JR.

Rabbit production in New York State is now a bona-fide industry. Since the first printing of this bulletin in 1934, the demand for rabbit meat and fur has increased immeasurably. In the early days of the industry, many investors suffered financial losses, largely because of alluring schemes that advertised quick and handsome returns. In former years, the fact that rabbits breed frequently and have large numbers of young that mature rapidly has been a boon to unscrupulous individuals, many of whom did not raise the breeding stock they sold at high prices.

Rabbits are sold primarily for meat and fur, the Angora now producing sizeable quantities of "wool." Hospitals, laboratories, and research workers in nutrition and medical investigations utilize a large number annually. Whether a breeder confines his enterprise to a few pairs or engages in the business on a commercial scale, the needs and requirements of the animals are the same.

Rabbit raising is at times a profitable enterprise in many states, notably in California and other areas with a temperate climate. As a part of farming it can be profitable in New York State if attention to details is considered. The most exacting care to the needs of the animals is required, and every effort must be made to learn their needs. Unless both the feeding and housing requirements of the animals are learned, failure is likely.

Who should raise rabbits? The New York State College of Agriculture at Cornell University annually receives hundreds of questions relative to these animals. Most inquiries come from those who have had little or no experience with rabbits. This bulletin is primarily designed to help the amateur breeder.

If you are to raise rabbits successfully, you should have an interest and love of animals. The expense of building even a small rabbitry is sometimes great enough to discourage the beginner. For that reason, if for no other, you should make an inventory of your premises and determine what building or shelter you can utilize. The advice of someone already in the rabbit business will lessen the initial troubles for you. Determine, if possible, the prospects for the sale of meat, fur, breeding stock, experimental animals, and pelts. If there is no ready market, you may find sources for the sale of a limited number of rabbits for meat and for institutional research purposes although the outlet for research is not great. Americans must still be educated to the nutritive value of the white, fine-flavored meat of domestic rabbits.

## THE RABBITRY

Before purchasing stock you should have a suitable place to house the animals. In northern latitudes such as New York State, the rabbitry should offer protection from the elements as well as from enemies such as dogs, cats, rats, and thieves. The beginner too frequently assumes domestic stock needs no more protection than wild rabbits, and loses many animals through inadequate

shelter and climatic conditions. You must not lose sight of the fact that the domestic animal has been cared for by man for many generations, and has grown to depend on this care.

Practically every farm has a chicken house, not fully tenanted by poultry, or ample space in a barn or old shed that may readily be converted into a first-class rabbitry. Free circulation of air without drafts, and plenty of light are essential to the proper raising of the animals.

An adult rabbit will thrive comfortably and raise young to the weaning stage in a hutch 2 by 2 by 6 feet. These hutches may be placed in tiers of two, or even three, but the lower hutch should not rest on the ground or floor. Reserve at least a third of the hutch for the nest box, which may be built in permanently or be arranged for easy moving. A removable box is preferable, because it allows more floor space for the active youngsters at weaning time. Furthermore, rabbits are tamer if they have a full view of their keeper. If the nest box is a permanent fixture, the animals too often retreat to it when approached, and become timid.

Permanent hay racks, arranged for animals in two separate hutches to be fed at one time, are widely used and have become almost universally adopted in large rabbitries.

The opening to the nest box should be several inches from the bottom of the box, and high enough that the adult must jump through the opening. Like many other animals, young rabbits cling tenaciously to the teats of the mother. When the doe leaves the nest box for food, the young are apt to hold so fast to the teats that some are dragged from the nest onto the floor of the hutch where, in chilly or severe weather, they are likely to perish before being rescued by the caretaker. The elevated opening of the nest box will help prevent any possibility of the young being drawn from the nest.

Frequently the nervous young will fall out when the door of the hutch or nest box is opened. A strip 4 inches high placed within the door opening of the hutch, and a similar one across the door opening of the nest box, will prevent such accidents.

Wood shavings are the ideal litter for the hutch because they absorb moisture well. Usually, one can get such material from a lumber yard without cost. If shavings are not available, straw is an excellent substitute, and should always be used for bedding in the nest box. The primary purpose of the shavings is to keep the hutches *clean and dry at all times*, which will help prevent or alleviate the various diseases common to rabbits.

Where rabbits are raised on a commercial scale, various types of self-cleaning sanitary hutches are used. In the East, where rabbit raising has not developed to such proportions, the hutches must be cleaned by hand. Various scrapers can be made by anyone with a little ingenuity and knack with tools. You may use a hoe to scrape the hutch free of droppings and soiled sawdust. This cleaning can be reduced to a minimum by placing a cake tin in a far corner of the hutch. Put a little sawdust into the bottom, and bring the top of the pan flush with the surrounding shavings on the floor of the hutch; the rabbits will quickly utilize this as a toilet. Empty the pan at regular intervals, preferably daily in summer and twice a week in winter. Remove all litter and bedding weekly; in warm weather spray the hutches with a good disinfectant, and put in clean material.

## CHOOSING A BREED

Domestic rabbits are bred for two purposes: for show animals, and for commercial or utility purposes.

Among the more important of the utility rabbits are the Flemish Giant, the New Zealand Red, and the Chinchilla. Other important rabbits of the utility class are Himalayan, New Zealand White, Havana, Rex, and a host of other less-known types.

The Flemish Giant is the largest of all rabbits. At the age of three months, if well fed, it attains a weight of 7 to 8 pounds, and at a year should weigh 14 pounds. As fur-producers and meat rabbits they are outstanding. The fur is of good texture, and the meat, is extremely palatable. The colors of these rabbits may be white, blue, light gray, sandy gray, or steel gray. The white is more widely used in the fur trade than are the others.

The New Zealand Red shares with the Flemish Giant in popularity. It is an attractive rabbit, and produces good fur and high-class meat. It is lighter than the Flemish Giant, weighing from 10 to 11 pounds at maturity. New Zealand rabbits are prolific and hardy, and an ideal animal for the northern rabbit breeder. The Chinchilla rabbit, so named because of the similarity of its pelt to that of the highly prized South American Chinchilla, is a sound substantial value. It has done more to stimulate the growth of the American rabbit industry in recent years than has any other breed. The fur of this rabbit is dense and finely textured. The pelts are used in their natural state. The heaviest animals, when mature, weigh up to 12 pounds.

The Himalayan is, in some respects, the handsomest of all domestic rabbits. It is a white rabbit with black nose, ears, and feet. While not so large as the forms already described, rarely exceeding 6 pounds, it is hardy and prolific, and should sell well as pets for the Easter trade.

The Havana is frequently spoken of as the *American Mink Rabbit*. The pelts, of a rich deep glossy chocolate brown, can be used in their natural color



Figure 1. The Flemish giant is a good meat breed. The huge dewlap is characteristic of the females of this breed.

to imitate mink or beaver. Havanas mature rapidly and are prolific breeders. They seldom exceed 5 or 6 pounds in weight.

There are many other breeds, but those listed are the outstanding present-day breeds found in the rabbitries of utility breeders.

If you hope to derive even a small income from rabbits, much time and thought should be devoted to the selection of a breed. Hardiness, prolificness, rapid growth, ultimate size, texture of meat, and quality of fur, and, most important, demand for any one of certain breeds in your neighborhood should influence you in the selection.

It is far better, when possible, to purchase stock locally than to send far away for it. You should investigate, among other things, the length of time the breeder who has stock for sale has been in business. This is a fair indication of the reliability of the breeder.

A novice entering the rabbit industry, either as a hobby or to make money, should hesitate before buying from a breeder *who promises to buy back, at a handsome profit to the investor*, all he can raise. Frequently such breeding stock is overvalued, or is misrepresented and does not reach the standard to which it is advertised.

Keep in mind at all times that the principal present outlet for rabbits is for food. A breeder who realizes a profit from the meat is on the right road. With effort, a market may be built up; remember that the principal source of profit is not that of selling breeding stock or of selling pets for children. Proceed with caution, gain experience with a few animals, and let the other fellow squander his savings in the hope of having it doubled or trebled in a year or two.

## FEEDING

The ambition of every rabbit breeder should be to produce good meat and good fur. This can be accomplished only by feeding the correct food, balanced in proteins, carbohydrates, fats, minerals, and the necessary vitamins that are to be found in the various feeds. With these considerations, you must also keep in mind the necessity for a low-priced feed. Unless you propose to sell the rabbits for anything other than meat or fur, cost of food a day for each rabbit should be no more than 1½ cents, and *preferably much less*. Feed your animals only good-quality fresh food, grains, or pellets. Dusty or mildewed food results in digestive difficulties and often is a predisposing factor in diarrhea.

In discussing feeding problems with New York breeders, the writer has found much conflicting testimony. Some believe that green food should be fed sparingly; others give the rabbits all that may be obtained. One author suggests giving young rabbits but little green stuff, yet the writer of this bulletin, as a boy, fed his young rabbits throughout the summer on a variety of greens and vegetables, with good results.

Alfalfa or clover hay, if available, will constitute the largest share of the food. It should be of good grade and properly cured, free from mold and an excess of dust and chaff. Timothy hay is not so good as either alfalfa or clover. Oats (rolled or crushed), cracked corn, oatmeal, whole wheat, linseed and soybean meal are the principal concentrates fed to rabbits. A mixture of these is better than a single grain.

Green feed can be furnished in the form of apples, carrots, and lettuce trimmings (these may be obtained without cost from many grocery stores). Feed such food sparingly in the winter, once or twice each week. *Exercise great care in the spring not to change the food too rapidly from grains and hay to a straight diet of succulent green feeds.* This is likely to cause diarrhea.

A teaspoonful of salt put in the grain ration weekly furnishes one of the important minerals so necessary for health.

Bread is relished by rabbits, and a slice of stale bread for each rabbit during the week will be eagerly consumed.

Most amateur breeders feed their animals entirely too much. As a result, the animals will not breed properly, much food is wasted, and the rabbit is likely to contract one of the various diseases common to these animals.

Because rabbits eat principally at night, feed them in the late afternoon or evening. Some breeders feed twice daily. If you make two feedings, give them one-third of the ration in the morning and the remainder in the late afternoon or early evening.

The beginner is often at a loss to know how much to feed his rabbits. Rather than guess or estimate, you should weigh the food. From  $\frac{1}{2}$  to  $\frac{3}{4}$  ounce for each pound of rabbit is a safe rule to follow. Thus, a 10-pound doe will receive 5 to 7 ounces daily. This may be made up of 2 ounces of grain or rabbit pellets and 5 or 6 ounces of hay.

Take great care to prevent the does from becoming too fat prior to the breeding period, or mating will prove unproductive. Likewise, the doe that has kindled (produced young) should be given milk-producing foods, and some green matter to act as a mild laxative to prevent constipation.

To prevent waste, place the grain in heavy crockery dishes and the hay in improvised racks made of 1-inch-mesh poultry wire. Cut the alfalfa or clover into 3- or 4-inch lengths, so it is easily handled with little waste. If the hay is not cut into short lengths, the rabbits will pull out a piece, eat a few inches, and discard the rest.

Fresh, clean water is indispensable to the rabbit. Nothing could be further from the truth than the false belief that rabbits do not drink. Water assists in the regular removal of waste matter from the body, and should be provided in winter as well as in summer. It is preferable to furnish the drinking water before feeding. If you feed a dozen animals in separate hutches, supply fresh water to each and then give the feed in the same order that you watered the rabbits.

Because rabbits are raised principally for human consumption, it is highly desirable that a balanced diet be fed that will put on flesh economically during the early life of the animal. For meat purposes, New York rabbits should attain marketable weight in 60 to 90 days. At this time, young of the larger breeds will weigh 5 pounds or more, depending upon the breed. There is little demand for smaller animals.

## BREEDING

Domestic rabbits come into heat every 3 weeks, and the period of gestation (length of time in which the young are carried) is normally 31 days. The young are weaned some 6 weeks after birth. The fecundity of the domestic rabbit is



high. Many breeders take advantage of this, and breed their animals as frequently as a litter has been weaned. It is possible to have 5 or 6 litters a year from one doe, but no wise breeder will consider doing such. In New York, or in other northern climates, 3, and at most 4, litters should be the rule.

When the doe comes into heat, it is exhibited in several ways. The external genitalia becomes enlarged and bright red in color. The doe will appear restless and ill at ease, rubbing her head against the sides of her hutch and attempting to join other rabbits nearby. Breeding should be attempted either in early morning or evening. Place the doe in the hutch with the buck; never permit the buck to enter the nest box of the doe to accomplish the mating act. If the doe is ready to accept the buck, mating should be accomplished within a few minutes, after which the buck will fall over on his side. Return the doe immediately to her hutch. It is well to introduce her to the buck 10 days later, to determine whether she is pregnant. This may be taken for granted if she refuses the buck.

Rabbits should not be bred until they are at least 8 months of age. Moulting animals should not be mated.

A week before the doe is to kindle (to bear young), provide fresh straw for the nest box. She will make a nest of this and pull fur from her body to line it. Within a day after the young are born, examine them to determine whether any are dead, runts, or deformed. It is best to remove the doe to another hutch while examining the contents of the nest. The number of young a doe may successfully nurse may run to 12, but it is a good rule to permit no more than 6 to each nursing doe. If more are in the litter, and are worth saving, place them with a doe that has young of the same age, but only 4 or 5 in her litter. If you have an opportunity to witness 6 husky youngsters in a litter of the same age as those of another litter numbering 9 or 10, you will never be induced to continue raising large litters. Occasionally a doe will desert, destroy, or eat her young. This is usually the result of disturbing elements about the hutch. A doe may fail to produce milk and the young will starve. Eating the young is usually the result of inadequate ration. Proper feeding usually overcomes this tendency. A doe that destroys more than one of her litters should be destroyed.

Young rabbits develop rapidly. At birth they are blind and naked. The hair soon appears, the eyes open 10 or 12 days after birth, and the young will leave the nest box at 2½ weeks, sometimes earlier. They then commence to eat solid food. Instead of green food and whole grain, feed bread and milk if it is available at low cost. This makes an excellent food. Rolled oats (bought in bulk at a low cost) is also good food. Young rabbits are weaned at 6 weeks of age. This is a critical period. It is better to remove one young rabbit daily, so that the mother may dry up gradually and not suffer any discomfort. If it is possible, however, leave the young with the mother until they are 2 months old. They will then eat everything she will, and can be introduced into the runs. A run 5 by 20 feet will accommodate from 15 to 18 young rabbits.

The young rabbits, in the first few months after weaning, need plenty of wholesome food to insure well-developed adults. A 2-months-old rabbit will eat only half as much as an adult, but at 4 months the Flemish and the New Zealand will eat as much as an adult in spite of a much smaller size. Here is where the breeder may lose money in maintaining them too long. The rabbits should be used for food or sold at this time.

A rabbit will usually outlive its usefulness as a breeder when it attains 3 years. Such is not always the case. A doe may continue to litter when well past this age; a buck if used too frequently for stud purposes may have outlived his usefulness at less than 3 years.

In New York State, the best time to breed stock is in early spring. It not only is the natural time for breeding but the young may be furnished green feed throughout the growing season at little or no cost. Keep in mind, at all times, the necessity of keeping the food bill at a minimum if you wish to show a profit on your animals.

## DISEASES OF RABBITS

Much of your success as a breeder depends on your ability to keep your animals free from disease. Cleanliness, proper feeding, and adequate housing will do much to alleviate diseases in rabbits.

Details regarding many diseases of rabbits are yet to be learned. If an animal shows symptoms, isolate it immediately from all others. If the condition appears serious, it is better to dispose of the rabbit than to run the risk of an epidemic. Much trouble of a digestive order in rabbits is directly traceable to feeding moldy grains, vegetables, and excessive green food. Particularly is this true of young animals.

### External Parasites

The more important external parasites are the burrowing mites, less important are fleas, lice, and bots.

Other external parasites of domestic rabbits are of little consequence in New York State.

#### Mange

The several species of mites that cause mange in rabbits are normally prevalent in the ear (ear mange and ear canker) or on the body. The female mite burrows deeply into the skin and causes a watery discharge that dries up and produces the characteristic scab. Symptoms give rise to itching, the animal scratching itself and rubbing the afflicted areas, thus giving rise to open sores. Symptoms include sore spots on the nose, on the face in general, and on the legs, gradually spreading to all parts of the body. As the fur is destroyed, yellowish crusts appear which adhere closely to the skin. The disease is highly contagious and will soon afflict the entire complement of a hutch; death usually results in severe cases.

*Treatment.* If the mites are restricted to the ear, bathe the ear with hydrogen peroxide and carefully pick off the loose scab. Twenty parts of olive oil and one part of carbolic acid or cresol will loosen the scab so it can be readily removed. Repeated applications are often necessary to remedy the cause of infection.

The treatment of skin mange is more tedious. Unless the animals are prized breeding stock, kill and burn them. The hutches occupied by such diseased animals *must be thoroughly disinfected* with lysol, sprinkled with gasoline and



burned out, and all the litter removed and burned. Isolate animals in adjoining pens and observe them for a month. It is better to isolate them and thoroughly disinfect the pens.

If treatment seems desirable, clip the hair over the diseased areas and soften the exposed areas with green soap and warm water. Leave the lather on for several hours, then sponge it off with warm water. If it appears desirable, repeat this treatment the following day. Two such treatments are usually enough. One part of sulfur to 4 parts of lard should be rubbed into the affected areas every 4 days until the animal recovers. If the diseased animal does not respond to such treatment, destroy it. Since there is some danger of human infection from rabbit mites, rub your hands in the ointment suggested; certainly a good soaping will help to alleviate danger from infection.

### **Wry Neck**

In wry-neck disease, presumably caused by a mite, the rabbit holds its neck to one side. In severe cases the animal is unable to maintain its equilibrium. The mites that cause disease live in the hutches, subsisting on the food and litter; they finally parasitize the rabbit. Treatment is similar to that for ear mange. The source of the disease may well come from infected hay or other sources of food.

### **Lice and Fleas**

Rabbit lice feed on blood and cause anemia. Symptoms are the small nits (eggs) attached to the hairs and the rubbing, scratching, and biting by the rabbit of its affected parts. Fleas are uncommon in rabbit hutches of eastern United States; the writer has not seen any instance of such. The symptoms are similar to those described for lice, causing loss of sleep and mechanical irritation. Lice and fleas are controlled by the powdered insecticides that are utilized in the control of these pests on dogs and cats. The DDT preparation, pyrethrum powders, or powdered Derris root are effective.

## **Internal Parasites**

Internal parasites, which include the protozoans, or single-celled animals, and the common roundworms and tapeworms parasitic upon practically every mammal, have their legions in the rabbit tribe. The protozoans are microscopic and can be seen and diagnosed only under high magnification; the intestinal worms are readily observed with the unaided eye.

### **Coccidiosis**

Coccidiosis is one of the more serious parasites among rabbits. Unfortunately, many adult rabbits that are little inconvenienced by the parasite transmit it to their young through droppings. The disease is often fatal to the youngsters. The coccidia in the liver of the rabbit produce white irregular masses indicating the presence of the parasite. Later these coccidia pass into the intestine and are finally eliminated in the droppings. In such, the organism is most resistant for long periods. When rabbits contract coccidiosis,

whether it be liver or intestinal origin, the symptoms are similar. Animals lose their appetites, lose weight, and produce loose, even wet, droppings. The disease is particularly prevalent among young rabbits.

**Control.** Since the organism enters the animal either through food or drink that has been contaminated by diseased individuals, it is advisable to check all possible sources of contamination. The disease may be minimized by daily removal of droppings. Half-inch wire mesh to form a false bottom to the cage has been particularly effective in reducing the disease. Scalding the hutches with boiling water has proved more effective in the destruction of coccidial cysts than the use of chemical disinfectants. The disease is often introduced with green feed which has been cut on ground infected with the coccidial germ, either through infection from the droppings of domestic or wild rabbits. Since bucks used for service are suspected of introducing coccidiosis into pens, the buck should not be permitted to remain with the doe longer than is necessary for mating. Moreover, young rabbits should be removed from the mother as soon as they are weaned. Immature animals are peculiarly susceptible to the disease and should be segregated from older animals until they have acquired the relative immunity of adults.

### **Worms**

Tapeworms, roundworms, and flukes are more or less present in all rabbits. When few in number, they cause little harm; when numerous they affect the rabbit in various ways. Irritation of the intestinal lining, liver, and lung, anemia, and emaciation result. Their presence is indicated by lack of appetite, diarrhea, and anemia, provided there is no trace of coccidia in the droppings. Treatment for intestinal tapeworms and bladderworms is usually ineffective. In severe infestation the animal should be destroyed.

## **Other Diseases**

### **Snuffles**

Snuffles is a common disease among rabbits and is highly contagious. The disease is characterized by bacterial infection of the nose, windpipe, and lungs. A persistent white nasal discharge, sneezing and crusty formations on the nose characterize the disease. The rabbit brushes its paws repeatedly over the nose, the forelimbs soon becoming matted with the discharge. The animal may recover or, if the infection is serious, may die within a few days. If snuffles is definitely diagnosed, the animal must be killed without delay, the carcass buried or burned. No adequate treatment is recognized for the ailment. If the nasal discharge is slight, it may be the result of an infection other than snuffles. The animals should be isolated and placed in clean hutches that are not subjected to drafts.

### **Pneumonia**

Many rabbits in our northern winter contract pneumonia. The disease may be recognized by labored breathing, watery eyes, and nasal pus. Listlessness and loss of appetite are other symptoms. The disease is usually fatal.

At first indication of the disease, the infectious animal should be quarantined. No treatment is known.

### Diarrhea or Scours

Diarrhea is characteristic of several intestinal parasites and is often prevalent in the spring, when green food first becomes available in quantity. Excessive amounts of fresh greens is a major contributing factor. The loose, often watery, odorous movements combined with extreme weakness are characteristic of scours. To correct the disease, limit the food to scalded milk and dry bread. *Do not feed any green food to sick animals.* When the droppings appear normal, restore rations gradually, first feeding on grains, prepared pellets or well-cured hay. Greens may be added sparingly until a normal ration is indicated.

### Sore Hocks

In hutches where urine-soaked droppings accumulate, this filth eventually irritates the hind feet, principally the hock. These parts become tender, inflamed, and eventually ulcerous. The presence of this infection indicates neglect on the part of the breeder. The difficulty can be readily overcome by keeping the hutches clean and in sanitary condition. The hocks of rabbits should be thoroughly washed with soap and warm water and placed in a pan containing a 1 percent compound solution of cresol. If abscesses form, these must be opened with a razor blade, drained, and washed with hydrogen peroxide. The affected animal should be placed on clean straw or shavings following such treatment.

## MARKETING

Rabbits may be sold for meat, laboratory animals, fur, breeding stock, and pets.

In New York State, people are gradually learning the excellent meat value of rabbits. Unfortunately, the animals do not yet sell well in the market, and the enterprising breeder must make his own market. Dressed rabbits of less than 5 pounds have little appeal to the housewife. If smaller rabbits are cut up, appropriately displayed in containers with a cellophane window as fryers are sold as frozen food, the eastern market would undoubtedly increase. A 5½-pound rabbit will dress approximately 3 pounds, divided as follows:

Hind legs	= 18½ ounces
Back	= 12½ ounces
Fore legs	= 9 ounces
Neck and rib meat	= 8 ounces
(includes liver and heart)	

Meat dealers have repeatedly informed the writer that the demand for rabbit meat is seasonal. Since large animals are in the greatest demand, the owner of smaller breeds must find a market elsewhere. Advertisements in the local press will help to move such stock, as will a suitable roadside sign. In 1960, retail prices for dressed rabbit averaged 50 cents a pound.

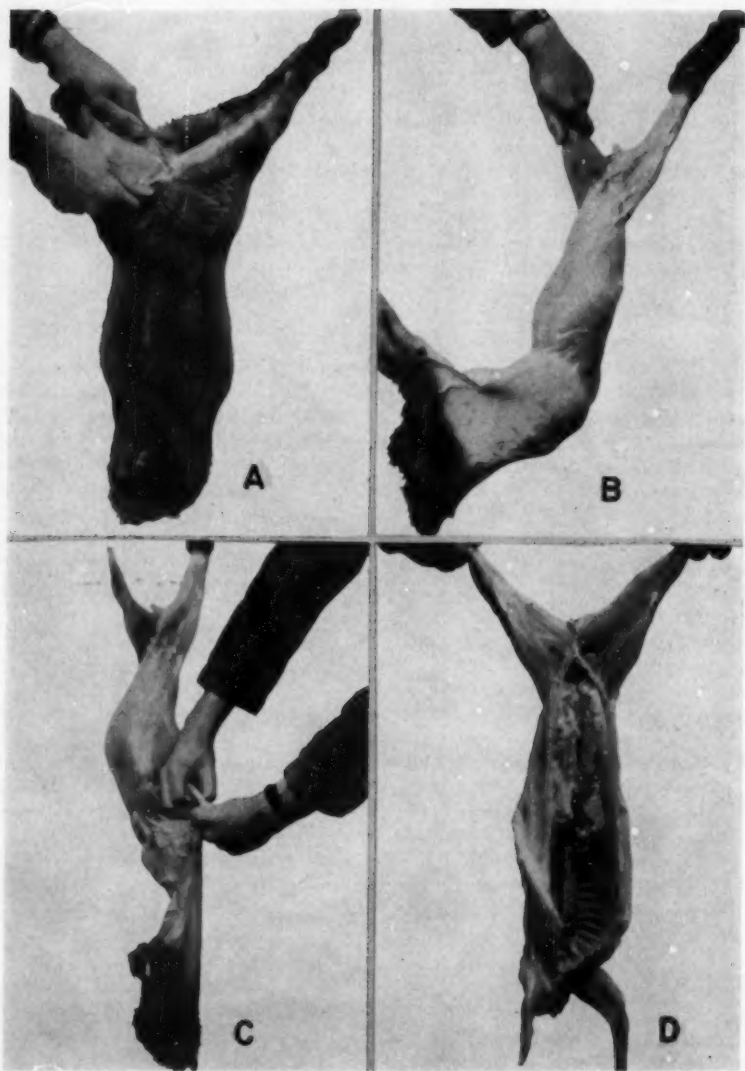


Figure 2. Skinning a rabbit. First make a cut from the hock of suspended leg to the base of the tail, continuing to the hock of the other hind leg (A). Turn the skin back with the fingers, taking care that the pelt is not torn. Work the skin down to the forelimbs (B); run a finger under the shoulder and pull the skin down over the wrist (C). The pelt is then pulled over the neck. The dressed carcass is shown in D.

### Preparation

Preparation of the rabbit for market is simple. The steps in slaughtering are not unlike the preparation of poultry and are just as easy. Kill the rabbit by striking it on the head with a stout stick. Hang the rabbit on a heavy screw hook suspended at shoulder height from the floor. The loose flesh between the tendon and bone of the right hind leg, just above the ankle or hock, will suspend the animal for proper dressing (figure 2, A). Remove the head, the front legs, left hind leg, and the tail. Allow several minutes to an hour, depending on weather conditions, for the animal to bleed fully and cool. Make an incision from the hock of the suspended leg to the base of the tail, then to hock of left leg (figure 2, A). Turn back the skin with fingers, leaving as much fat as possible on the carcass. Work the pelt down over the body, using the fingers solely for this purpose. When the fore legs are approached, work the fingers under the arm and gently pull the skin to the severed wrist. Pull the skin back over the neck.

Stretch the skin over a suitable frame, flesh side out. Slit the belly from stem to stern, removing the entrails. Remove the liver and the heart, discarding the lungs. Market the rabbit as a unit (figure 2, D), or cut as indicated in figure 3.



Figure 3. Rabbit cut into five parts for market. The hind quarters, back, and adjoining flesh and the forelimbs are separated. Liver and heart can be used for home consumption.

### Pelts

Since the principal source of hatter's felts and inexpensive trimmings are derived from rabbit fur, this potential income must not be neglected. Most rabbit pelts used in the American industry are at present imported, but an increased demand has been noted for American pelts. Prices in 1950 for domestic rabbit pelts averaged \$1.50 a pound. Those from large bucks usually weigh 2 or less per pound, and some from 3 to 4 per pound. One large buyer states that if one could produce a quantity of chinchilla rabbits that would be enough to match for garments, they might be worth \$1.00 to \$1.25 a skin. Other buyers quote chinchilla rabbit pelts of good color at 50 to 60 cents each.

In brief, there is a market for pelts; the returns will help to defray the cost of production. Careful preparation of the skins with due regard to stretching (do not overstretch), placing the fresh pelts in a cool, airy situation away from heat and rats, and careful removal of excess fat and flesh while the pelt is still fresh, pays dividends.

### ANGORA RABBITS

The relatively recent introduction of the Angora into the rabbit industry has met with much interest. Angora rabbits produce a fur notable for its softness, warmth, and strength. The fur is used primarily in the manufacture of juvenile clothing, trimmings, and to some extent in clothes for general wear. Few individuals support themselves exclusively from the production of Angora "wool." The prospects of a livelihood from the industry are not likely. One should commence in a small way, with few animals, expanding as the prospects of the market indicate.

The fur on Angora rabbits grows rapidly, the 5- to 8-inch annual growth permits a shearing about 4 times a year. An adult animal in good health will produce about 12 ounces of wool a year.

The care of Angoras is similar to that of other rabbits. Keep the animals clean, in dry hutches, and provide warm quarters if the wool is sheared during the winter months. Equipment for grooming and shearing must include a table with a blanket stretched over it, a hairbrush with single steel bristles, a pair of surgeon's or barber's scissors, a short ruler for measuring the length of the wool, and paper bags for storing the product. Part the hair along the midline of the back, brush downward and outward to remove webbing and foreign matter. Repeat at half-inch intervals until the entire body has been groomed. Remove stained ends and matting with the shears. Rabbits can be sheared at 8 or 9 weeks of age and at 10-week intervals thereafter, cutting the fur close to the body. Normally you start above the tail and cut a half-inch swath to the head, repeating until one side has been completely sheared. Turn the rabbit, resume the shearing from the head toward the rump until the head, legs, and belly are sheared. To do this, hold the rabbit in your lap, and hold the hind limbs gently between your knees.

An experienced individual can groom and shear 4 rabbits in an hour. In New York State, rabbits that are sheared in the colder months of the year should be housed in heated quarters. Leave at least  $\frac{1}{2}$  inch of wool on the animal.

The wool is usually sold directly to commission houses or dealers. Prices a pound for Angora wool (summer 1948) are shown below. Prices are unstable and are apt to change without notice.

No. 1 Plucked	\$11.00
1 Super	11.00
1 Clipped	9.00
2 Clipped	7.50
3 Clipped	5.50
4 Clipped	3.50
5 Clipped	2.00



## PRECAUTIONS

1. Do not buy rabbits without having a definite purpose in mind.
2. Do not start on a large scale. Be satisfied to start in a small way and expand with experience.
3. Do not buy cheap or inferior stock and hope to sell at high prices.
4. Do not start with one or two individuals of many breeds. Determine what breeds appear most likely to be successful in your community; then stick to these.
5. Do not expect to get rich quick. Few persons in any legitimate business succeed in this respect.
6. Do not be misled by gilt-edged propositions until you have investigated thoroughly. The rabbit breeder is no different from the poultryman or the cattle breeder. He must know his animals to succeed.
7. Do not think you know everything about rabbits after keeping them a year. A successful man learns something new each day of his life. A rabbit breeder should certainly be no exception.
8. Do not mistreat your animals. Gain their confidence.
9. Do not allow dogs about your rabbitry, or, for that matter, anything foreign to their daily lives.
10. Do not try to see how many rabbits you can produce from a doe, rather see how well they can be produced.
11. Do not overlook any symptoms of sickness. Isolate diseased animals as soon as they are known to be unhealthy. Cleanliness in the hutches will go a long way toward keeping out disease.
12. Do not neglect the feeding. Proper feeding measures and the right kinds of food determine any success you may have.

## SOURCES OF SALE OF FUR AND MEAT

The College does not maintain a list of breeders of rabbits. Nor does it vouch for the integrity, reliability, or financial standing of any individual or concern. Those listed below may be helpful in determining a list of breeders in New York State.

American Rabbit and Cavy Breeders Association, 309 Whitfield Building, 5941 Baum Boulevard, Pittsburgh, Pennsylvania.

American Rabbit Dealers Association, 363 Seventh Avenue, New York, New York.

American Angora Rabbit Breeders Cooperative, Palmer Lake, Colorado.

Angora Woolen Products Cooperative, Malta, Montana.

Cover photograph. A White Flemish doe. The White Flemish is a rapid grower and a prolific breeder

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